

# **Factors influencing infant feeding choices of PMTCT mothers at St. Barnabas Hospital, Libode, Eastern Cape**

by  
Ntombizanele Dorothy Didiza-Maganga

*Assignment presented in partial fulfilment of the requirements for the  
degree Master of Philosophy (HIV/AIDS Management) at Stellenbosch  
University*



Supervisor: Prof. JCD Augustyn  
Faculty of Economic and Management Sciences  
Africa Centre for HIV/AIDS Management

March 2012

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March 2012

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## ABSTRACT

Infant feeding in the context of HIV/AIDS has recently been too controversial. It has been observed from this study that there are multiple factors that can influence an infant feeding choice. Attitudes and the shortage of health care workers to offer nutrition education are the main sources of confusion when PMTCT mothers at St Barnabas make a choice.

The recommendation is that mothers on PMTCT should receive on- going individual counseling on nutrition on infant feeding. Each individual PMTCT mother should be assessed on compliance with AFASS criteria.

## OPSOMMING

Die voeding van babas in die konteks van MIV/Vigs het in die onlangse verlede redelik kontroversieel geraak. Hierdie studie toon aan dat daar verskeie faktore is wat „n invloed kan hê op die voedingskeuse van die baba indien die moeder MIV-positief is.

Die hooforsake vir „n gebrekkige keuse deur moeders by die St Barnabas Hospitaal is „n ernstige tekort aan gesondheidswerkers om voedingsopvoeding aan die MIV-positiewe moeders met klein babas te gee.

Daar word in die studie voorgestel dat moeders op PMTCT deurlopende voorligting betreffende voeding gegee moet word. Elke individuele moeder moet ook beoordeel word vir voldoening aan AFASS kriteria.

Verdere voorstelle vir die bekamping van die oordrag van moeder-na-kind infeksie met MIV word in hierdie studie aangebied.

## ACKNOWLEDGEMENTS

I am truly grateful to God for Prof. Johan Augustyn for his unfailing support in the writing of this assignment. His assistance certainly put an indelible mark in my life as well. May you continue the good work.

I would like to thank my colleagues and management in the maternity ward who went an extra mile in providing me with space to conduct my research. The energy you put in assisting me to carry out this task is appreciated. You are awesome!

Without the PMTCT mothers I would have not been aware of the challenges faced by this sector of my community in feeding their babies. Thank you for opening up to me, I am flattered! I did not deserve such humility from you.

Last but not least I wish to thank my brothers Bulelani and Sicelo and niece Qhama , my spiritual friends Maureen and Mzi and my son Galelo, for their material resources , prayerful support and computer expertise. Thank you.

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## Chapter 1. Introduction

### 1.1. Background.

This study was conducted at St Barnabas Hospital, Libode, Eastern Cape. It is reported that the positivity rate of ANC clients at Nyandeni sub-District was 17.6% whilst the test rate was 91.8% during the last quarter of 2010 (DHIS 3<sup>rd</sup> quarter 2010) this is a promising picture against the background of the stigma attached to HIV/AIDS in the area. The number of babies that were neither breastfed nor formula fed was not captured. During the same period 22% of women admitted at St Barnabas Hospital maternity ward were on PMTCT (raw data from maternity records)

According to IDT information (May 2011) 71.6% of the population of Nyandeni District Municipality are unemployed and are dependent on the child support grant. One can assume therefore that these families are living below the poverty breadline. The widespread assumption that exclusive formula feeding is appropriate for PMTCT with the exclusion of the implementation of AFASS criteria has exacerbated infant feeding problems because some mothers are unable to sustain exclusive formula feeding.

### 1.2. The research question.

What are the factors that influence infant feeding choices of PMTCT mothers at St Barnabas Hospital?

### 1.3. Significance of the study.

If factors influencing infant feeding choices on PMTCT mothers are identified, then mothers can be educated accordingly and the result will be less or nil transmission of HIV after delivery . Health care will improve and money spent on ART will cater for other health needs. There will

be an improvement on infant feeding practices. Lastly from research and practice it has been established that making an informed decision /choice on which is the best feeding infant option is difficult and confusing thus this study will help MCHW and Nutrition propose a suitable strategy for women.

#### 1.4. The aim of the study.

The aim of the study was to identify the factors influencing infant feeding choices of mothers on PMTCT mother's , in order to identify the gaps in the nutrition content of existing education programmes to make recommendations in the nutrition versus HIV/AIDS information.

#### 1.5. Objectives.

The objectives of the study were among other things to establish the infant feeding practices of the PMTCT mothers and what the institution is offering in the programme. The study also intended to dig out the factors that propelled to choose an infant feeding option. After gathering such data then recommendations on lessons learnt be offered to improve the programme towards decreasing the vertical spread of HIV/AIDS among infants.

#### 1.6. Summary

In this chapter the background to the study on factors influencing infant feeding choices of mothers on PMTCT, research question, significance of the study, aim and objectives, were explained. In the next chapter literature research on these factors will be explored.

## Chapter 2. Literature review

### 2.1. Introduction

The literature research presented in this chapter focuses on factors that influence infant feeding choices of mothers on PMTCT. This chapter is consequently organized into four (4) themes: 1) the infant feeding challenge specifically in developing countries, the value of nutrition education in infant feeding, infant feeding problems created by stigma in HIV/AIDS and the significance of the level of education of the mother.

The guidelines highlight the difficulty of choice in infant feeding but they do not articulate how these choices should be made other than that HIV infected women should receive specific guidance through counselling (de Paoli, 2004).

### 2.2. The infant feeding challenge specifically in developing countries.

Tropp (2003) argued that the greatest burden of infection in women and their children is proportionately borne by the poorest countries, especially in sub-Saharan Africa. It is therefore not a universal problem. Breastfeeding is seen as a major health promoting factor for infants in developing countries but the risk of HIV by this route is challenging traditional practices and health policies in low-resourced countries. She believed that maternal and infant factors contributing to the risk of MTCT through breastfeeding are still poorly understood and not well researched. It was also observed that there are many problems that hindered the effectiveness of the optimal feeding interventions, even where VCT facilities are available, acceptance of HIV testing is low because there is fear of stigmatization by the spouse, family or community and therefore compliance with drug regimens.

Leshabane (2007) observed that infant feeding experiences of HIV positive mothers were made through difficult choices. They concurred with the above study that infant feeding represents a great challenge in the prevention of MTCT. They argued that the international guidelines informing infant feeding counseling suggest feeding methods that reduce the risk of HIV transmission, and discourage mixed feeding (combining breast feeding with other fluids) .

This study demonstrated the gap between intentions and infant feeding practices in a context where social expectations to breast feeding are high and where kin and neighbors are part of the decision making team surrounding infant feeding.

It highlights the tension between the competing concerns of the medical and social risks involved in the choice of infant feeding , and documents that the feeding options may be difficult to adhere to, whether a mother chooses exclusive breast feeding or replacement feeding.

### 2.3. The value of nutrition education in infant feeding

According to the Department of Health (2010) trained health care personnel should provide high quality, unambiguous, and unbiased information about risks of HIV transmission through breastfeeding, ART prophylaxis to reduce this risk, and risks of replacement feeding. This counseling on infant feeding must commence after first post- test counseling session in pregnancy and should be discussed with women at every antenatal visit. Furthermore mixed feeding during the first 6 months of life should be strongly discouraged as it increases the risk of childhood infections.

Moland (2010) argued that the infant feeding controversy highlights multiple challenges that HIV infected women, infant feeding counsellors and health systems have encountered trying to translate and implement the shifting infant –feeding recommendations in differing context.

Furthermore evidence suggests that there is vigorous controversy around whether HIV infected women in developing countries should choose formula feeding over breastfeeding their infants. (Health Policy Plan (2002)

Sibeko (2009) observed that mothers readily identified infant feeding in the context of HIV infection as an issue of great concern. They concluded that it is evident that mothers rarely received quality infant feeding counselling and consequently mixed feeding, that is a widespread practice but one that is highly risky for HIV transmission, remained a common feeding problem. They suggested that exclusive breast feeding was best practiced with support; following disclosure of HIV status and that the availability of free formula did not guarantee exclusive formula feeding but instead led to inappropriate feeding practices.

Hence Omwega (2006) claims that MTCT knowledge influences the choice of alternative infant feeding option but not breast feeding practices. Cow's milk is observed as the most common, socio- culturally acceptable breast milk alternative in this Kenyan community.

They recommended that in order to improve MTCT knowledge , health education and nutrition counselling should be intensified in PMTCT programs, VCT centers and ANC clinics and efforts made to increase the supply of cow's milk within the community so as to make it more readily available and affordable. The biggest challenge being staff shortages and scarcity of skills to do the nutrition education to these mothers.

#### 2.4. Infant feeding problems created by stigma in HIV/AIDS

Doherty (2006) asserts that HIV positive mothers are struggling to protect their decision-making autonomy. Uncertainty about the safety of breast feeding has increased the power and influence of health workers, who now act as gatekeepers to not only this new knowledge but also

to essential resources such as formula milk. Fear of disclosure of HIV status and stigma has also weakened the ability of mothers to resist entrenched family and community norms that encourage early introduction of fluid food and that question non-breastfeeding.

Women who chose to exclusively formula feed had difficulties accessing formula milk because of inflexible policies and a lack of supplies at clinics. Limited post partum support has led to social isolation and mothers doubting their ability to care for their children. They argue that breastfeeding also confers several protective health benefits to the infant and is the cultural norm.

In contrast, replacement feeding is prohibitively expensive in resource - poor settings, is associated with increased infant morbidity and mortality, and can expose the mothers to HIV-related stigma and discrimination from her community. All these contradicting advantages put the mothers in a confused state unable to decide carefully.

Bii (2008) postulated that there was a strong relationship between the mode of infant feeding and spouse awareness of HIV status. Mothers who had disclosed their HIV status to their spouses were likely not to breastfeed than mothers who had not disclosed their status.

Cames (2010) studied the AFASS of the infant feeding option as prescribed in WHO trial (PMTCT). It was observed that mothers opted for breastfeeding essentially out of fear of family rejection because most of them were afraid of denigration for disrespecting tradition if they formula fed or being suspected of HIV infection. Achieving exclusive breast feeding remained a difficult challenge as they engaged in a continuous struggle with close elders to avoid fluid feeding. Additional stress and fatigue were fed by their perception of a transmission risk through breast milk. Exclusive formula feeding seemed easier to implement especially as formula was provided free of charge. Formula feeding mothers more frequently had a supportive

partner, a strong personality and lived in better socio-economic conditions than breast feeding mothers. WHO recommends exclusive breast feeding for the first 6 months remains the appropriate option for many HIV-infected mothers in sub Saharan Africa. Its acceptability and feasibility need to be improved by promoting it as the best feeding option for all infants. Levy (2010) believed that the absence of adequate psycho- social support contributed to substantial maternal psycho- social distress. Infant feeding in communities with a high prevalence of HIV/AIDS is a potential challenge for mothers who must ultimately decide how to feed their infants within the context that constrain their choices.

## 2.5. The impact of infant formula feeding in PMTCT.

Infant formula eliminates HIV transmission but it incurs risk of increased mortality whereas breastfeeding has multiple benefits but entails the risk of HIV transmission. The case against providing free or subsidized formula to HIV infected mothers is based on the fact that it exacerbates disadvantages of formula feeding, compromises free choice, targets beneficiaries erroneously, creates a false perception of endorsement by health workers, compromises breastfeeding, results in disclosure of HIV status, ignores hidden costs of preparation of formula, increases mixed feeding, which is unsatisfactory for all women, requires organization and management of programme that are complicated and costly; and finally increases the „spill-over“ effects into the normal breast feeding population.( Healthy Policy Plan 2002) Hussein Coovadia (2007) indicate that exclusive breastfeeding reduced the risk of HIV transmission by nearly half compared to when formula was given with breast milk and by more than ten times compared to when solid foods were also part of the infant diet.



## 2.6. The effect of level of education of the mother

Lars (2009) concurred with Leshabani (2007) when they suggested that well educated mother's breastfeed for a substantially shorter time than their less well- educated peers. Also mothers who were socio-economic better-off or had participated in the PMTCT programme also breast feed for a shorter duration except among a limited group where replacement feeding was not considered a realistic option especially in rural setting. Complementary feeding including breast milk was the dominant practice for infants under 6 months old among HIV positive mothers. They assert that the choice of infant feeding was also influenced by the socio-economic status of the mothers and nevirapine intake. They argued against the level of education as the factor that influences the mode of infant feeding.

## 2.7. Summary

The literature reviewed on this chapter identifies the factors that influence infant feeding choices of mothers on PMTCT. It is clear that there are quite a number of factors that cloud the mother's thinking into making an informed decision. This choice is difficult and confusing but an overriding influence is the quality of nutrition education that the mother received prior or during pregnancy or after delivery.

## Chapter 3. Methodology and data collection and analysis

### 3.1. Introduction

In this chapter, the research design and methods, study design, study area, sampling strategies, sample size, study population, inclusion criteria, exclusion criteria, measurement, data collection methods, data analysis, ethical considerations and will be discussed.

### 3.2. Research design and methods.

#### 3.2.1. Study design

This is a descriptive research design whereby both qualitative and quantitative data collection methods were used: in-depth interview and literature reviews. A structured questionnaire was utilized to interview mothers on PMTCT who were booked during the research period, PMTCT Coordinators from Nyandeni LSA and Hospital respectively, ARV Coordinator and 2 focus groups made up of nurses and PMTCT clients. This was done so as to determine what is offered by the hospital in terms of the infant feeding element in the PMTCT package and what their attitudes, knowledge and perceptions are concerning the whole infant feeding issue.

To determine content validity, PMTCT coordinator was asked to assess the contents of the instruments developed by the investigator and used for the first time in the current study.

#### 3.2.2. Study area.

The study was conducted at St Barnabas Hospital in the maternity ward. This area was chosen because the researcher is working there so it was easy to get permission from the authorities to access the relevant information and also time and resources allocated to the study were limited. This site was suitable because it is ideally placed in terms of accessibility by the road and also it is a referral district hospital( secondary level) where all pregnant HIV positive mothers at the

Nyandeni area are booked for management and care. Complicated PMTCT cases are referred to a tertiary hospital nearby.

### 3.3. Sampling strategies and sample size.

Convenience sampling method was utilized with random non-probability sampling technique. From 01<sup>st</sup> October to 31<sup>st</sup> December 2010 (DHIS 3<sup>rd</sup> quarter 2010) an average of 44 PMTCT patients were booked at the hospital's maternity ward. Taking this factor into consideration 30 PMTCT mothers were included in the study. The questionnaire was designed in English and translated in Xhosa. There was 100% agreement on the meaning of the translations. The PMTCT and ARV Coordinators and the 2 focus groups were interviewed face to face as they were key informants.

#### 3.3.1. Study population.

This study consisted of three sets of population: PMTCT mothers booked at the time, 2 focus groups made up of 5 nurses working in the PMTCT section and 5 patients on PMTCT and PMTCT Coordinators (LSA and Hospital).

### 3.4. Data collection methods.

The investigator collected data herself. The investigator explained the study to the individual mothers post delivery. Those mothers willing to participate in the study signed a written consent forms. The study utilized the following: semi-structured interviews ( for all respondents) with open ended and closed ended questions, key informants , the two separate focus group discussions made up of five respondents on each party to obtain suggestions on how to improve infant feeding strategies in the institution, observation done during consultation to collect information on the nature and services provided to the patient regarding infant feeding nutrition

and literature review on ANC records to countercheck the reliability of information given in answering the questionnaire.

### 3.5. Data analysis.

Data was organized into manageable common themes so as to be able to do analysis. All questionnaires were checked one by one for completeness, accuracy and uniformity. Each questionnaire was then be coded to classify the answers into meaningful categories in order to bring out a pattern. Quantitative data was in the form of descriptive statistics which included frequencies, means and medians used to analyze the data. Descriptive variables of number of counselling session attended, marital status, formal educational qualification, age, and source of income were used to interpret the data. The quantitative data was coded and categories and themes were identified

### 3.6. Inclusion criteria.

Mothers who were already be on PMTCT and referred from one of the fifteen feeder clinics and were in possession of an ANC card and had signed a consent form.

### 3.7. Exclusion criteria.

Mothers who were mentally challenged even if they meet the inclusion criteria.

### 3.8. Ethical considerations.

Prior to conducting the study, the investigator enquired from Stellenbosch University for ethical approval. Since the researcher registered in 2005 ethical consideration was not a prerequisite so the Eastern Cape Provincial Department of Health Ethical Committee was informed. Permission was sought from the Area Manager Maternity ( St Barnabas Hospital) and patients. Confidentiality was observed and all data was kept under lock and key. No names were used

except for signature in the consent form. Participants were informed that the data will be used anonymously and that the aim of the study was to improve the PMTCT program so as to make culture-sensitive. Furthermore, participation in this research were voluntary and participants had the right to withdraw at any point of the study, for any reason, and without any prejudice.

### 3.9 Summary

In this chapter research design and methods, data analysis and ethical considerations were described. The results of the analysis will be presented in the next chapter.

## Chapter 4. Results and discussions

### 4.1 Introduction.

The findings of the data analysis are presented as follows in the following sections: a) socio-economic data of the mothers, b) disclosure and HIV status and c) ante-natal history.

### 4.2. Socio economic data of respondent mothers

All of these mothers came from surrounding clinics and were on the PMTCT programme. The ages were categorized along these age groups: 21% (N=6) from 15-20 years category, 53% (N=16) from the 21 -30 years group, 23% (N= 7) from 31 – 40 years and 3% (N=1) from <40years category as explained in the Table below.

Table 4.1. Age factor

Category( in years)	Frequency	Valid percent	Cumulative percent
15 -20	6	21	21
21 - 30	16	53	74
31 - 40	7	23	97
>40	1	3	100

Table 4.2. Educational status

	Frequency	Valid percent	Cumulative percent
No formal education	6	20	20
Primary	4	13	33
Secondary	18	60	93
Tertiary	2	7	100

Sixty percent of the mothers had not completed their secondary education and as such were not employed. Twenty percent were illiterate and could not read nor write. Thirteen percent had primary education and only seven percent left school whilst in tertiary institutions.

Table 4.3. Marital status

	Frequency	Valid percent	Cumulative percent
Single, never married	21	70	70
Married, civil and customary	7	24	94
Divorced/ separated	2	6	100
Cohabiting	0	0	100

Seventy percent were single and six percent were neither divorced nor separated and this means all the burden of child care depended on their independent decision.

Only twenty four percent were married. None were cohabiting. This information explains why sixty two percent is dependent on child support grant, twenty eight percent is self employed either a vegetable vendor or merchandising, three percent dependent on spouse/partner income and seven percent were employed as civil servants.

Table 4.4. Sources of household income

	Frequency	Valid percent	Cumulative percent
Spouse/ partner	1	3	3
Self- employed	8	28	31
Civil servant	2	7	38
Child support grant	19	62	100

Table 4.5. Members within a mother's household

Staying alone with other children	10% ( N=3)
Own parents with other children	67% (N= 20)
In- laws and other children	20% (N=6)
Spouse and other children	3% (N=1)



Sixty-seven percent stayed with own parents and 20% stayed with in-laws because of their marital status and the fact that they were unemployed. 10% were staying alone and only 3% were with their spouse/partners.

Table 4.6. Resources

Refrigerator	50%(N=15)
No Refrigerator	50%(N=15)

Half of the mothers had refrigerators at home although it was not asked if they were used and the other half did not own any refrigerator.

Table 4.7. Sources of clean drinking water

Tap ( running water)	40% ( N=12)
River ( tank, dam, well) etc	60% ( N = 18)

Sixty percent (n= 18) of the mothers did not have clean drinking water. They were either using water from the household tanks or from the river or from the dam/ well. Thirty percent (n=9) used electricity, twenty seven percent (n=8) made use of paraffin, thirty seven percent used wood and six percent used gasoline as source of fuel.

Table 4.8. Sources of fuel

Electricity	30% ( N= 9)
Paraffin	27% (N=8)
Gas	6% ( N=2)
Wood	37% ( N=11)

## 4.3. Disclosure of mothers' HIV status

Seventy three percent ( N= 22) claimed to have disclosed their status to one or more family members whilst twenty seven percent ( N=8) did not.

Table 4.9. Level of disclosure

Parents	Partner/ Spouse	Siblings	Children	Nurse/Health worker	Total
50% (N=11)	27% (N=6)	9% (N=2)	4% ( N=1)	10% (N=2)	100% 22

Fifty percent disclosed to their parents especially their mothers, twenty seven percent claimed that their spouse/ partners knew their status, ten percent disclosed to nurses/ health workers, nine percent disclosed to their siblings and four percent to their children.

Table 4.10. Level of support from significant others

No support	10% ( N=2)
Little support	17% ( N=4)
Moderate support	13% (N=3)
Lot of support	60% ( N=13)
Total	100% ( N=22)

Of the 22 mothers that had disclosed 10% claimed to receive no support at all. 17% stated that they received little support, 13% also stated to have received moderate support and 60% claimed to receiving a lot of support.

Out of the eight (8) that did not disclose 25% alleged that they were not ready yet, 25% had fear and 50% had problems with the stigma attached to HIV/AIDS by their respective communities as explained in the table below.

Table 4.11. Reasons for non- disclosure of HIV status

Not ready yet	25% ( N=2)
Fear	25% ( N=2)
Stigma	50% (N=4)
Total	100% (N=8)

#### 4.4 Medical and clinic history.

Thirteen percent of the mothers started their ANC whilst in the first trimester. It is not recorded whether they continued attend the sessions or they reappeared in the last trimester. Fifty six percent were in the second trimester and thirty one percent booked during their last trimester of pregnancy. As illustrated in the Table below:

Table 4.12. Gestational age ( in months) when ANC was started

1-3	13% (N=4)
4-6	56% ( N=17)
7-9	31% (N=9)
Total	100% (N=30)

Table 4.13. Nutrition and infant feeding sessions received from the clinic

	Frequency	Valid Percent	Cumulative Percent
Never educated	10	33	33
Once	8	26	59
More than once	12	41	100

Thirty three percent claimed not to have not received any infant feeding counselling sessions in the clinics, whilst twenty six percent said that the aspect of infant feeding is mentioned briefly and forty one percent claimed to have just listened to infant feeding topic more than once.

Table 4.14. Feeding options selected

	Frequency	Valid Percent	Cumulative percent
Exclusive breast feeding	17	57	57
Exclusive formula feeding	9	30	87
Undecided	4	13	100

Fifty seven percent opted for exclusive breast feeding, thirty percent chose exclusive formula feeding and thirteen percent were still undecided. However forty eight percent have changed the infant feeding option after delivery and fifty two percent maintained their choice.

Table 4.15. Reasons for the change in feeding option.

	Frequency	Valid Percent	Cumulative Percent
Stigma of HIV status	1	6	6
Partner/Spouse	0	0	6
Availability of supplies	5	36	42
Ease of preparation	8	58	100

Fifty eight percent alleged that they had changed the option because of the ease of preparation, thirty six percent claimed that supplies of formula were available and six percent claimed that they were influenced by the stigma of HIV status so they wanted to hide their status

Table 4.16. Motivating factor for change in feeding option.

	Frequency	Valid Percent	Cumulative Percent
Partner/spouse	4	13	13
Nurse/midwife	16	53	66
Counselor	1	4	70
Self	9	30	100
Family tradition	0	0	100

In the above Table fifty three percent claimed that the nurse / health worker had an influence on the feeding option. Thirty percent had made an independent choice, thirteen percent were influenced by the spouse/partner and four percent were influenced by the counsellor. In all very few make an independent informed decision.

Table 4.17. Members who had a say in the feeding option

	Frequency	Valid Percent	Cumulative Percent
No one (independent)	8	27	27
Partner/spouse	5	16	43
Relatives including own mother	15	50	93

Friends	2	7	100
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Fifty percent claimed that their own mothers exerted a lot of influence on how the infant should be fed, sixteen claimed of spouses/ partners had a say, seven percent of mothers allowed friends to have a say and twenty seven percent made an independent choice.

#### 4.4.7. Acceptance by spouse or partner

Seventy percent of spouses (N=21) accepted the feeding option and 30% disagreed with the mothers.

#### 4.5. Responses from the interview from the key informants: i) ARV Coordinator, PMTCT Coordinator (institution) and PMTCT Coordinator Sub –District

They agreed on the fact that this programme ought to have added human resource because it is difficult for them to focus on this programme fully. Staff shortages in the ward and also in the clinic have resulted in mothers not being counselled on the infant feeding element. They had attended an average of three in- service trainings from the Province. They have observed a lack of updated information on the health workers this resulted in conflicting messages given to PMTCT mothers.

They differed on their opinions on which option they should advocate for. Those who were operational felt that because of unavailability of human resources, lack of expertise and shortage of physical spaces infant formula resulted in spill-over effects.

Another opinion was that breast feeding should be discouraged because it is HIV exposed even if research studies advocate for exclusivity.

ii) Five nurses from the ward.

They advocated for exclusive breast feeding because it made their work easier. All women practiced one option so to them the issue of confidentiality was maintained. They also cited staff shortages and lack of material resources as barriers to their choices.

iii) Five(5) mothers in the ward.

They felt they preferred to exclusively breastfeed because of two reasons: the confidentiality is maintained and ease of feeding especially after delivery. They cited fear of mother to child transmission but difficulty in accessing the formula in their respective clinics and the majority was not working. Lack of education on current trends in infant feeding and stigma of HIV/AIDS as their barriers were mentioned.

#### 4.6. Factors influencing the infant feeding choice of mothers in PMTCT programme.

Information gathered above indicates that the institution does not provide adequate screening and education for these infected mothers. They are attended together with other HIV negative mothers. Infant feeding is the same irrespective of status of the mother. Mothers should maintain exclusivity in breast feeding or formula.

This creates at least two major problems especially to mothers: lack of confidentiality and lack of education. To the institution the major barriers are that the institution is in the process of preparing for accreditation to BFHI status, and there is neither physical space nor human resource to give proper and intense education and screening. To worsen the situation the operational staff cited that they never attended any training themselves on the issue.



Seventy percent of the mothers were single and sixty two percent were solely dependent on child support grant. The assumption is that the majority of these women lack independence and there is some sort of exchange of benefits and level of freedom. So the parents will definitely be seen as being influential in determining the infant feeding option as sixty seven percent is staying with parents and twenty percent with in-laws.

Ninety three percent of the mothers have not completed their secondary education, fifty percent of them have no refrigerators, sixty percent do not have clean running water and seventy percent use some other form of fuel besides electricity. If these factors were prevailing and these mothers chose exclusive formula feeding it meant this choice could not be trusted so their babies were mix fed. Combining the breast with formula is not advisable since it is attributed to increased risk of infection or transmission of HIV.

Fifty percent disclosed to their mothers and twenty seven percent to their spouses/partners. Sixty percent felt that they received a lot of support from their significant and these had no problem in making an informed choice concerning the issue.

There seems to be a general lack of nutrition education in the clinics. This was supported by the fifty nine percent who either received no education or just attended once. Taking these results in consideration it is either there is shortage of personnel to do the education or the health care workers are not capacitated adequately to deal with the subject.

Fifty two percent of mothers did not change the option of choice. Seventy percent of the spouses/partners supported the infant feeding option chosen by the respective mother. Those that did change the infant feeding option cited stigma, fear and ease of preparation as reasons for change. The observation was that stigma is still very rampant in this community.

#### 4.7. Summary

There seemed to be interplay of factors here. There was not one single influencing factor. For example lack of independence overlapped with literacy level, lack of resources, lack of infant education by health care workers and stigma from the community and immediate families played a significant role.

In the next chapter conclusions, implications and recommendations in relation to results and discussions will be tabled.

## Chapter 5. Conclusions, limitations, implications and recommendations

### 5.1. Introduction.

In this chapter conclusion, implications and recommendations in relation to factors influencing infant feeding choices of PMTCT mothers will be drawn from the previous chapters.

### 5.2. Conclusions.

The current study investigated the factors influencing PMTCT mothers on making an informed infant feeding choice. From the findings it was explicitly clear that mothers were not given individual counselling from the clinics and the AFASS criteria was ignored. As a result they all resorted to what was said and offered in the institution. At home they practiced mixed feeding.

Half (50%) disclosed to their parents especially their mothers and claimed to receive full support on which ever method they chose. As a result the decision to breastfeed or not laid on the mothers. This is a tough decision because earlier on all mothers on PMTCT were advised to use infant formula. In fact the assumption was that all the problems in this issue emanated from the lack of nutrition education.

### 5.3. Limitations.

The current study investigated the factors that might be influencing infant feeding options of mothers on PMTCT at St Barnabas Hospital. The study observed that this was a convenience study where mothers came with relatives sometimes having not disclosed their HIV status so the option would be what the mother felt is expected by those accompanying her and hide her status fearing retribution.

It has been difficult to observe other areas as the maternity ward was the only entry point selected because of time and money and it was difficult to assess other points of contact within the same institution. These findings may not be a true reflection of the factors influencing a PMTCT mother's choice of feeding.

Lastly healthcare workers may choose the option for the mother because of the time factor and not award her the information needed before making a decision.

#### 5.4. Implications on practice.

Health care workers have their attitudes and preferences towards the programme, they may decide for the The shortage of skilled personnel may rob the programme the time and efforts for proper screening and application of updated The mothers usually stay in the maternity ward for a day or two so because it is the only entry point selected, healthcare workers may not be able to probe for the truth from these recipients of the service. This is a very busy area.

The caring of any infant irrespective of HIV status needs support from family which becomes worse if the mother did not to disclose and that may result in mixed feeding which is dangerous for an infant that is HIV exposed.

Lastly the supply of free formula breaks the confidentiality issue because it is common knowledge that a certain formula is issued to PMTCT mothers. In these rural disadvantaged

### 5.5. Recommendations.

After careful studying and observation the following suggestions can improve the institution into a best model of care:

- 1) A designated staff component be employed to attend to these mothers especially in the institution so that gaps in the clinics can be identified and sorted out.
- 2) The Eastern Cape and National Department of Health offer in-depth in-service training to nurses and other health workers in the clinics and wards on the PMTCT programme.
- 3) A multi disciplinary approach be utilized whereby key figures like the hospital and clinic boards are identified in the community for training as well on the issue to address MDG 4 and 5
- 4) The role of the churches and other government departments in the community should not be undermined instead find means and ways to incorporate the PMTCT program in their activities.
- 5) An in –depth study into the factors that influence mothers into choosing a specific infant feeding option should be done in the near future and public platforms be instituted for counseling and financial aid.

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## ADDENDUM A

### INTERVIEW SCHEDULE FOR KEY INFORMANTS AND FOCUS GROUPS.

#### Introduction.

After I observing screening, admission and follow up after delivery of PMTCT mothers in the maternity ward at St Barnabas Hospital , I arranged interviews with the PMTCT coordinator, ARV coordinator at the hospital, PMTCT coordinator at the LSA whose answers were recorded after the interview. During the interview I asked some questions about the key informants' experience in the PMTCT program , the PMTCT training and mentoring he/she has had, and some of his/her observations concerning the PMTCT programme like whether AFASS criteria is applied at St Barnabas Hospital, Eastern Cape.

The interview took 30 minutes.

The interview guide was be semi-structured, guided by the following kinds of questions:

#### A . Institutional human resource allocation.

1. How long have you been be involved with PMTCT activities at St Barnabas Hospital/ Nyandeni LSA/ ARV unit?
2. Have you attended PMTCT trainings and workshops?
3. How often have you participated in mentoring sessions in the PMTCT unit.
4. Are you able to attend to all clients admitted in one month?
5. If not who else is responsible for these clients?
6. Is the referral system efficient for these clients to be retained in the system?

#### Factors that may influence the choice:

1. During your consultation/ observation sessions which option is most preferred:

- a. Exclusive breast feeding
  - b. Exclusive formula feeding
  - c. mixed feeding
  - d. Other (mention)?
2. Do you find that the mothers often come undecided? Explain.
  3. How does the stigma in the community influence the choice of infant feeding? Explain.
  4. Have you ever experienced a situation where a mother would opt for an option and you find her practicing the other whilst still admitted?
  5. If yes, what do you do to help them follow and make an informed decision and sustain it

### CHALLENGES

1. What happens when the mother only booked at delivery?
2. Do you involve the partner/spouse and significant others in the counselling sessions? Explain.
3. Is AFASS nurse friendly or mother friendly? Explain. 4. Is time allocated for attending to these women adequate? If not what needs to be done?

### OPINION.

1. What is your opinion concerning the issue of infant feeding in the PMTCT programme?
2. Do you feel comfortable when the infant formula is no longer freely available? Explain
3. Which group do you predominantly admit and what are the influences for choosing a particular source against the other?

## **ADDENDUM B**

### **QUESTIONNAIRE: FACTORS INFLUENCING INFANT FEEDING CHOICES ON PMTCT PROGRAMMES AT ST BARNABAS HOSPITAL, EASTERN CAPE.**

Please fill in the details below. To protect your identity you do not give out your name. Please note that you are free to participate or withdraw at any stage of the interview. Your responses will be kept confidential under lock and key. It will only be used for academic purposes only.

#### **A. PERSONAL DETAILS.**

Hospital Number:

Date of admission:

Clinic where you attended antenatal classes:

Number of dependents:

#### **B. SOCIO DEMOGRAPHIC DATA.** Please mark with an X in the appropriate box.

##### **1. AGE GROUP.**

15 – 20      ☐

21 – 30      ☐

31 – 40      ☐

>40          ☐

## 2. EDUCATIONAL STANDARD.

No formal education ☐

Primary ☐

Secondary ☐

Tertiary ☐

## 3. SOURCES OF HOUSEHOLD INCOME

Self employed ☐

Civil servant ☐

Unemployed ☐

Child Support Grant ☐

Disability Grant ☐

## 2. RESOURCES.

- Do you have a refrigerator at home?

Yes ☐ No ☐

- Do you have clean running water?

Yes ☐ No ☐

- Where do you get your drinking water?

Tank ☐ River ☐

Tap ☐ Dam ☐

- What is your source of fuel?

Electricity ☐ Paraffin ☐

Gas ☐ Wood ☐

Cow dung ☐

## 5. MARITAL STATUS

Single- never married ☐ Married ☐

Civil ☐ Customary ☐

Divorced ☐ Separated ☐

Co-habiting ☐

## 3. With whom do you live?

Alone (with child) ☐

Own mother ☐

Own father ☐

Own mother & father ☐

In-laws ( mother& father) ☐

Other relatives ☐

Friends ☐

Other: specify ☐

#### 4. MATERNAL HIV/AIDS STATUS

Has the mother disclosed Yes ☐ No ☐

If status is disclosed, to whom?

Parents ☐

Partner/ Spouse ☐

Siblings ☐

Friends ☐

Support Group ☐

Nurse/Health worker ☐

#### 5. How would you rate the support you receive from significant others regarding your status?

No support ☐

Little support ☐

Moderate support ☐

Lot of support ☐

#### 6. If not disclosed, give reason for non- disclosure

Not ready yet ☐ Diagnosed after delivery ☐

Fear ☐ Stigma from community ☐

### **C. MEDICAL AND CLINIC HISTORY.**

- Gestational age when ANC was started in months

1-3 ☐

4-6 ☐

7-9 ☐

- Nutrition and Infant feeding education sessions

Never ☐

Once ☐

More than 4 times ☐

- Which method of infant feeding have you selected during the ante natal period?

Exclusive breast feeding ☐

Exclusive infant feeding ☐

Mixed feeding ☐

Undecided ☐

- Is the infant feeding choice changed?

Yes ☐

No ☐

- If yes, what is the reason?

Stigma of HIV status ☐

Partner/ spouse support ☐

Availability of supplies ☐

Ease of preparation ☐

- Who motivated you to make the choice of infant feeding?

Partner/Spouse ☐

Nurse/ midwife ☐

Counsellor ☐

Self ☐

Family tradition ☐

- Who else besides you has a say in how your baby is fed?

Partner/Spouse ☐

Relatives ☐

Friends ☐

- Do you think your partner/spouse accepts the method you have selected?

Yes ☐

No ☐

THANK YOU FOR YOUR PARTICIPATION.



## ADDENDUM C



UNIVERSITEIT•STELLENBOSCH•UNIVERSITY  
jou kennisvenoot • your knowledge partner

### STELLENBOSCH UNIVERSITY

#### **CONSENT TO PARTICIPATE IN RESEARCH**

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*Factors influencing infant feeding choices of mothers on PMTCT programmes at St Barnabas Hospital ,  
Libode, Eastern Cape.*

You are asked to participate in a research study conducted by *Ntombizanele Didiza-Maganga*, from the *Africa Center of HIV/AIDS Management Studies* at Stellenbosch University. Results will contribute towards partial fulfillment towards Master Philosophy Degree in HIV/AIDS Management. You were selected as a possible participant in this study because you are the beneficiary of the Programme and time and money constraints restrict the researcher into including those participants that are already admitted at St Barnabas Hospital working towards improving the programme at St Barnabas Hospital.

#### **1. PURPOSE OF THE STUDY**

To assist MCWH and Nutrition to propose a suitable strategy for PMTCT mothers at Libode, Eastern Cape that befits their culture and values.

#### **2. PROCEDURES**

If you volunteer to participate in this study, we would ask you to do the following things:

##### **QUESTIONNAIRE**

Complete a questionnaire on factors that influenced you to make your infant feeding choice. This will take approximately 45minutes of your time at a time this has been identified as convenient.

##### **INTERVIEW**

A short Interview with the researcher will be conducted with the hospital's PMTCT Coordinator, PMTCT Coordinator District and hospital's ARV Coordinator to understand the processes that have been taken to implement the PMTCT programme – infant feeding element and successes, challenges and lessons learnt

during the process. This will take approximately an hour of your time at a time that has been identified as convenient.

### **3. POTENTIAL RISKS AND DISCOMFORTS**

Information required by the researcher will require aspects that may seem private . However the intention of the study is to assist the hospital provide a best model PMTCT infant feeding element guide.

### **4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

It is envisioned that the study can assist the hospital to strengthen the current PMTCT Guidelines- infant feeding element which will directly benefit the PMTCT clients and their families, hospital and community indirectly.

### **5. PAYMENT FOR PARTICIPATION**

There will be no payment for participation in this study. This is a voluntary exercise that is contingent on your participation.

### **6. CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained at all times as no names will be written from the participants.

There is no direct threat to the participants. All documentation associated with the study will be kept under lock and key in a closed location. It will not be accessible to the public. The information might also be inspected by St Barnabas Hospital management

### **7. PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

## 8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact: Ntombizanele Didiza- Maganga. 0832776183 at St Barnabas Hospital , Dietetics Department, Libode. After hours you can contact me at 0475340047

## 9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

### SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to *me* by ..... in  
*Xhosa* and *I am* in command of this language or it was satisfactorily translated to *me*. *I* was given the opportunity to ask questions and these questions were answered to *my* satisfaction.

*I hereby consent to participate in this study.* I have been given a copy of this form.

.....  
Name of Subject/Participant                      Signature of Subject                      Date

### SIGNATURE OF INVESTIGATOR